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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/652,868	08/29/2003	Yousef M. Jarrah	8540G-000214	1008
27572 7590 01/07/2008 HARNESSE, DICKY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			EXAMINER WIEHE, NATHANIEL EDWARD	
			ART UNIT 3745	PAPER NUMBER
			MAIL DATE 01/07/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/652,868	<b>Applicant(s)</b> JARRAH, YOUSEF M.	
	<b>Examiner</b> Nathan Wiehe	<b>Art Unit</b> 3745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_\_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 November 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 and 11-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 11-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

Applicant's arguments filed 7 November 2007 have been fully considered but they are not persuasive. Applicant argues that the reference of Choi fails to disclose the claimed relationship since the drawings are not indicated as being to scale. Applicant notes Hockerson-Halberstadt, Inc. v. Acia Group Int'l, 222 F. 3d 951. However, the examiner is not relying on precise proportion to determine particular sizes as in the Hockerson-Halberstadt case. In fact, the examiner is not relying on any measurements and is merely noting what is reasonably disclosed and suggested to one of ordinary skill in the art, pursuant to *In re Aslanian*, 590 F.2d 911, 200 USPQ 500 (CCPA 1979). Specifically, the drawings of Choi disclose an impeller having a plurality of blades in a generally spiral arrangement. One of ordinary skill in the art would readily recognize that a spiral arrangement is defined by a polar angle that is most commonly only defined by a radial component.

Additionally, Applicant states that the inducer of Choi extends radially as opposed to axially as claimed. The examiner respectfully disagrees. Although the inducer vanes of Choi are tilted in the radial plane the inducer extends predominately in the axial direction, i.e. the inducer has a give height with respect to the flow path.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choi et al. (6,499,955), hereinafter "Choi". Choi discloses a compressor including a vaneless diffuser (12), a volute (14) in communication with the diffuser and a radial impeller (4) operable to compress a fluid stream and direct said stream to the volute. The impeller further includes a hub (4a) with an axis of rotation and a plurality of blades (4b) extending from the hub. The blades include a leading edge proximate the hub and a trailing edge proximate the volute. Applicant claims that a blade surface is defined by a polar angle as a function of the radius that appear to form a generally spiral shaped blade surface and since applicant has not further specified or defined the surface, the spirally oriented blades of Choi met the claim limitation. Also, Choi's impeller includes an inducer formed proximate the leading edge of the blades and extending generally axially with respect to the flow path. Choi does not disclose the use of an inducer with a height between five to seven percent of the impeller outer diameter. Since applicant has not disclosed that having an inducer height that is substantially five to seven percent of the outer diameter of the impeller solves any stated problem or is for any particular purpose above the fact that the inducer improves flow efficiency and it appears that the inducer of Choi would perform equally well with an inducer having an axial height that is five to seven percent of the diameter of the induce as claimed by applicant, it would have been an obvious matter of design choice to modify the inducer of Choi by utilizing the dimension as claimed for the purpose of improving the flow efficiency.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan Wiehe whose telephone number is (571)272-8648. The examiner can normally be reached on Mon.-Thur. and alternate Fri., 7am-4:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look can be reached on (571)272-4820. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Nathan Wiehe  
Examiner  
Art Unit 3745



EDWARD K. LOOK  
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1/2/08